



Noise Monitoring

An employee's exposure is determined through noise monitoring. This noise monitoring data allows for the identification of job positions with an average noise exposure of 85 dBA and employees working in these positions are included in the hearing conservation program.

Although people differ in their sensitivity to noise, as a general rule, work areas should be tested if:

- you have to shout to make yourself heard two feet away,
- the noise hurts your ears,
- it makes your ears ring, or
- you are slightly deaf for several hours after exposure to the noise.

Annual Hearing Testing

Employees in the hearing conservation program receive annual hearing tests to detect even slight hearing losses long before it affects a person's ability to communicate. Individuals who show a hearing loss receive additional training on hearing protection and use. The goal is to catch hearing loss before it impacts you and ensure that your hearing protection is used properly to prevent further loss.

Hearing Protection

Once noise hazards are identified, hearing protection is provided to all employees with average noise exposures of 85

dBA or greater. There are many styles, shapes and materials of hearing protection and are available through various safety equipment suppliers. Talk to your supervisor if hearing protection is not already available in your work area. The important part is to wear your hearing protection when you're working around loud noises, both on and off the job. It's the only defense you have against hearing loss.

Getting Assistance

EH&S has posted signs at many of the locations that require hearing protection, but if you're unsure, have any questions about the hearing conservation program, or need assistance with hearing protection, ask your supervisor or call EH&S.



Environmental Health & Safety

P.O. Box 641172
Pullman, WA 99164-1172
(509) 335-3041

Wenatchee.....509-663-8181
TriCities.....509-372-7163
Vancouver.....360-546-9706
Spokane.....509-358-7500

<http://www.ehs.wsu.edu>

Hearing Protection



Prevention for a Lifetime

Effects of Noise on Hearing

Noise is not a new hazard. It has been a constant threat since the industrial revolution. However, hearing loss is not, an inevitable part of your job or a natural part of aging. With proper hearing protection, both on and off the job, your hearing can last your entire life.

Don't be fooled into thinking that you just get used to loud noises—you're actually losing your hearing, and there is no treatment—no medicine, no surgery, not even a hearing aid that truly corrects hearing once it's damaged.

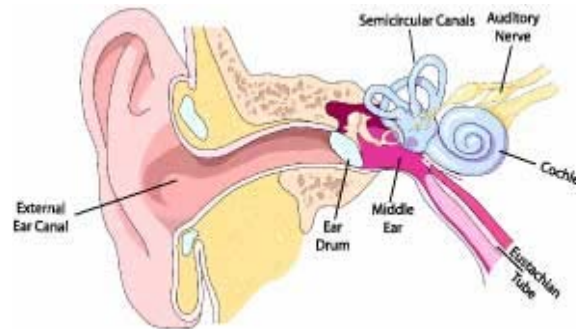
The amount of damage from noise depends on the intensity of the noise, measured in decibels (dB), and the duration of exposure. Sounds above 130 dB are painful, and most people will avoid these. However sounds between 85 and 120 dB

Type of Noise	Decibel (dB)
Soft whisper	30
Quiet room	40
Conversation	60-65
Automobile	70-74
Lawn mower	80-85
Printing press	85-90
Routers, saws	95-100
Tractor	100
Planer	100-110
Rock music	110-115
Airport runway	140+

may not cause physical pain, but they will damage hearing over time. Other effects of loud noises may include anxiety and irritability, an increase in pulse rate and blood pressure, or an increase in stomach acid. Very loud noise can reduce efficiency in performing difficult tasks by diverting attention from the job.

How the Ear Works

Sound waves cause the eardrum to vibrate. These vibrations pass through three tiny bones in the middle ear and on to



the hair cells in the fluid-filled inner ear.

The inner ear contains the auditory (hearing) nerve, which leads to the brain. There, the vibrations become nerve impulses and go directly to the brain, which interprets the impulses as sound: music, a slamming door, a voice, etc.

When noise is too loud, it begins to kill the nerve's endings in the inner ear. As the exposure time to loud noise increases, more and more nerve endings are destroyed. As the number of nerve endings

decreases, so does your hearing.

Too much noise exposure may cause a temporary change in hearing (your ears may feel stuffed up), a temporary ringing in your ears (*tinnitus*), or an inability to hear high pitched noises, such as children's voices. These short-term problems usually go away within a few minutes or hours after leaving the noise. However, repeated exposures to loud noise can lead to permanent, incurable hearing loss because there is no way to restore dead nerve endings.

Sources of Noise Exposure

Noise exposure can occur both on and off the job. Wood and metal working equipment, presses, power mowers, backhoes, grinders and ventilation equipment are examples of equipment that may produce noise sufficient to damage hearing. It is equally important to identify sources of recreational noise exposure, such as hunting, rock bands, chain saws and ATVs. Hearing protection should be used whenever you will be exposed to loud noises.

Hearing Conservation

EH&S implemented the hearing conservation program to preventing hearing loss from noise exposure related to WSU employment. The goal is to identify employees whose job duties may expose them to noise greater than an average of 85 dBA.